



Application No. 10/072,809
 Response filed December 2, 2004 to
 Examiner's Amendment included with
 Notice of Allowance of 11/19/04
 Replacement Sheet

1/20

NaPdfl

10 M A R S L C F M A F A I L A R M L F V A -25 -20 -10	20 ATGGCTCGCTCCTTGTGCTTCATGGCATTTGCTATCTTGGCAAGGATGCTCTTGTTGCC 30 40 50 60
70 Y E V Q A R E C K T E S N T F P G I C 80 90 100 110 120	70 80 90 100 110 120
130 T K P P C R K A C T I S E K F T D G H C S 140 150 160 170 180	130 140 150 160 170 180
190 K I I L R R C L C T K F C V F D E K M T K 200 210 220 230 240	190 200 210 220 230 240
250 T G A E I L A E E A K T L A A A L L E E 260 270 280 290 300	250 260 270 280 290 300
310 E I M D N * 320 330 340 350 360	310 320 330 340 350 360
370 AAAGTTCTACCTTCTTAAAGTAGCTAATGTTGTTTAATTGGCTTTAGTAGC 380 390 400 410 420	370 380 390 400 410 420

Figure 1



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430 440 450 460 470 480
| | | | | |
CTTTTATTACACTTTAAATAAGTGTGGCACTTCATCCTTGTGCAATCTTGCACTAAGT

490 500 510 520 530 540
| | | | | |
TTATTTGTGTACTTTAATGAAAATGACCTCTATGGCTTTGGTTAAAAAAAAAAAAAA

541
|
A

Figure 1 continued

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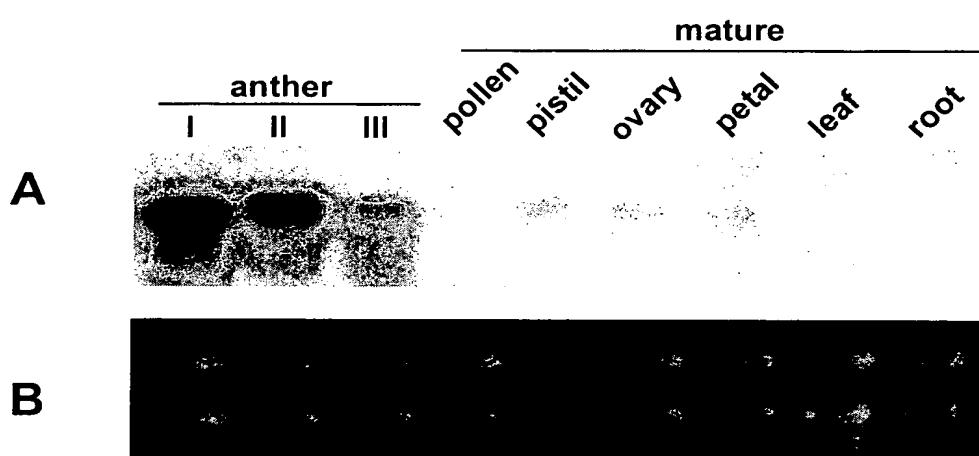
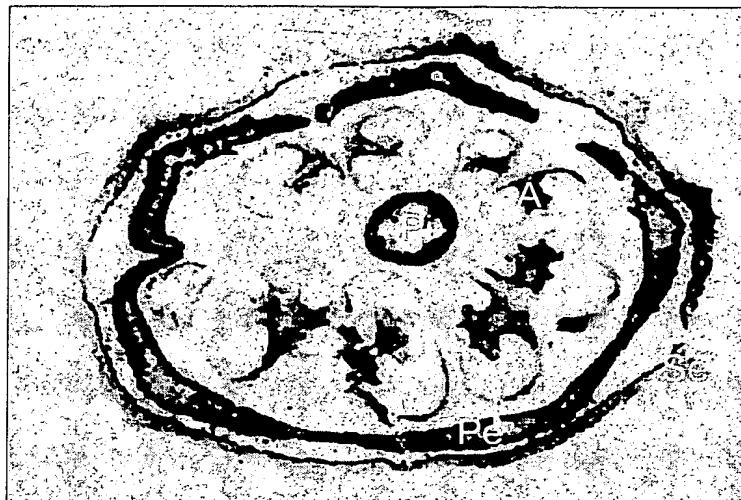


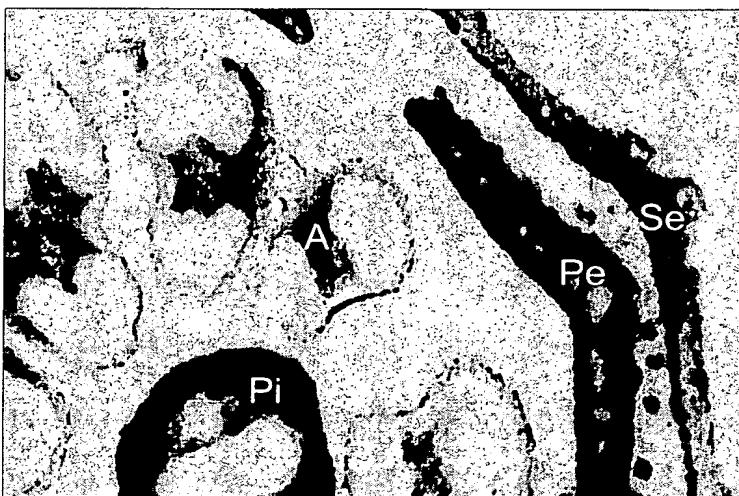
Figure 2

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A



B



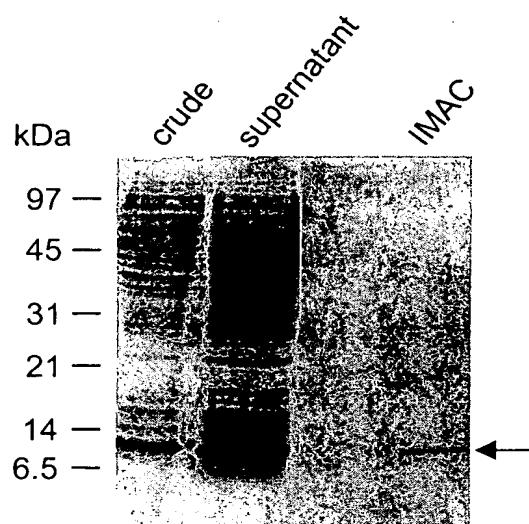
C



Figure 3

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A



B

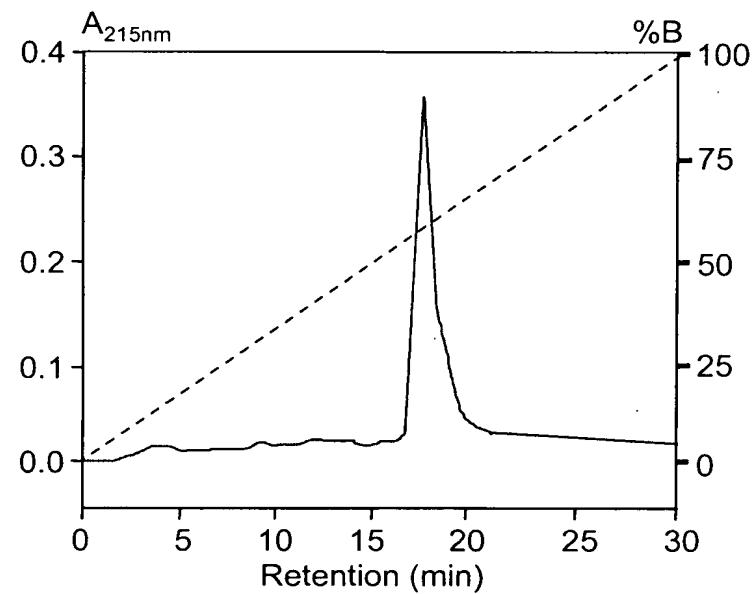


Figure 4

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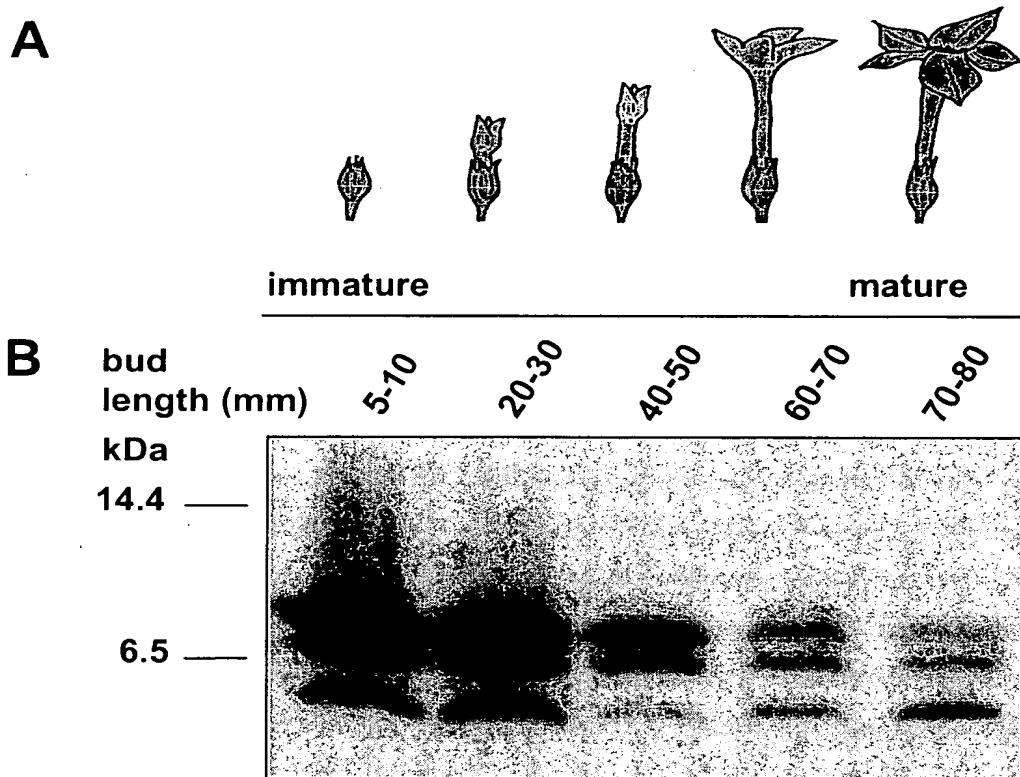


Figure 5

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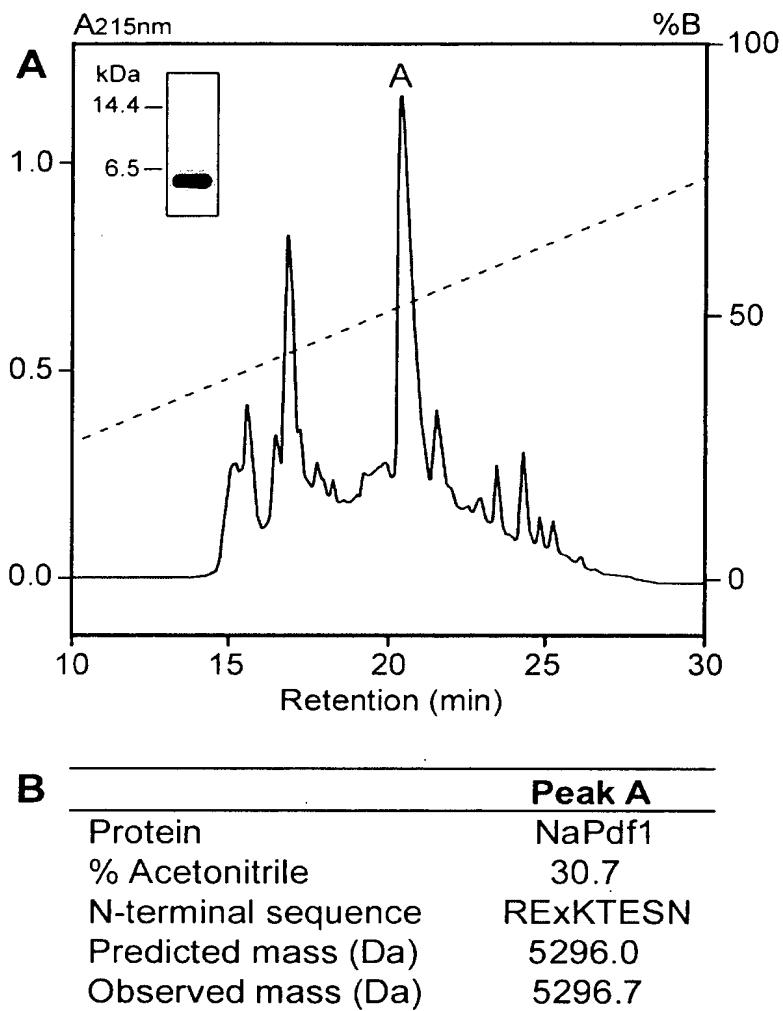


Figure 6

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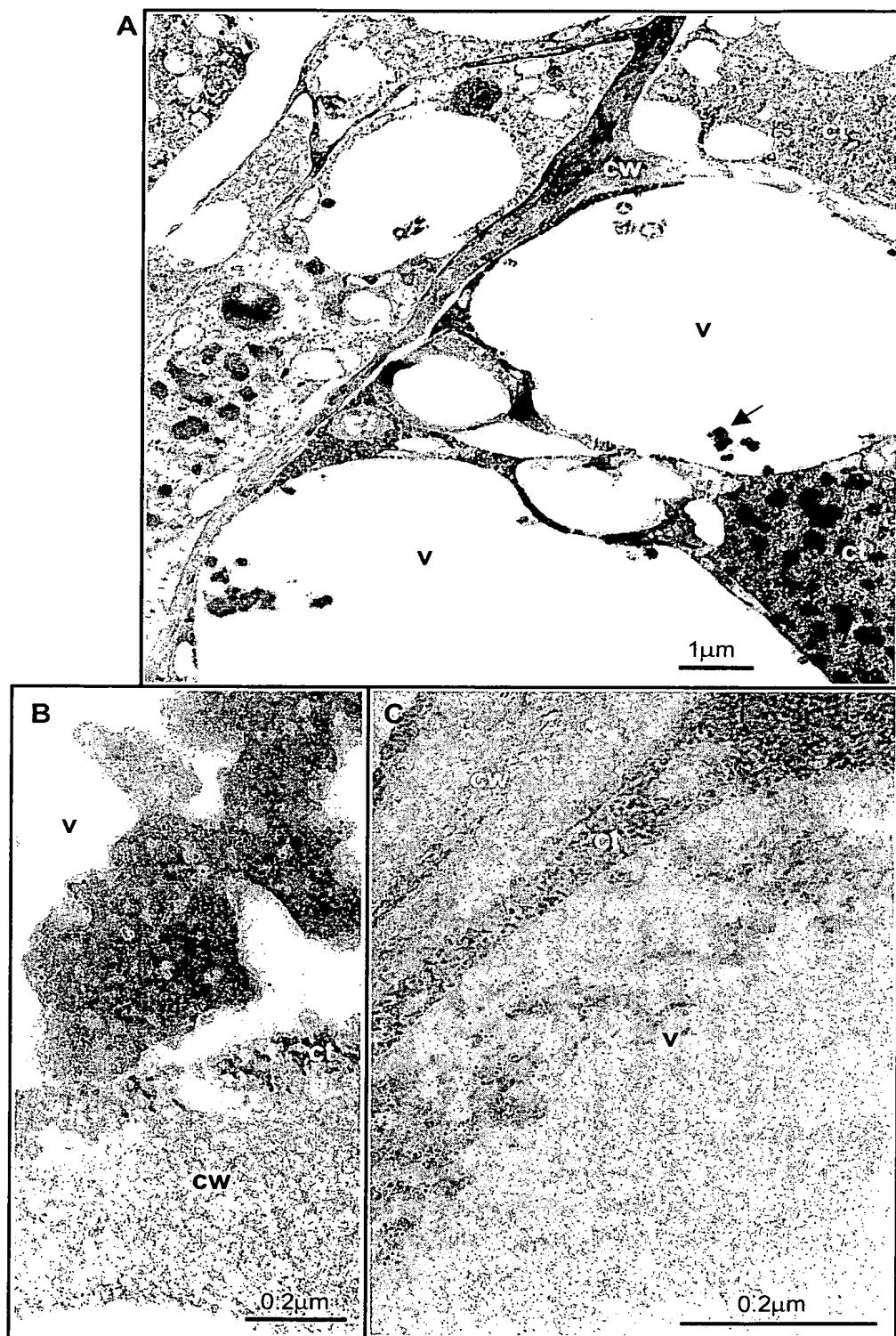
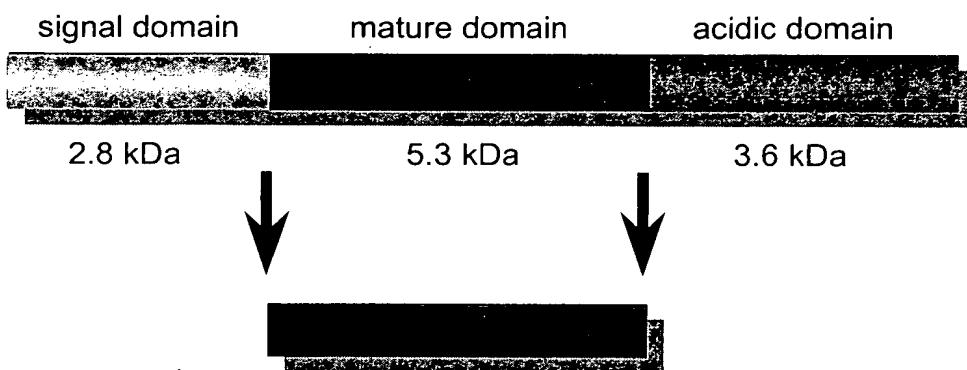


Figure 7

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A



B

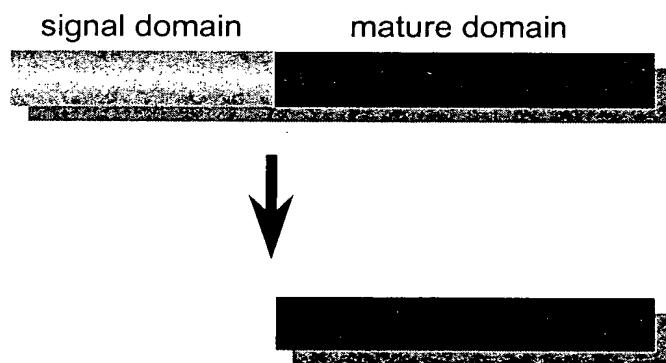


Figure 8

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NaPdf1	(<400>18)	MARSLCFMAFAILAMMLFVAYEV-----QA-RECKTESNTFPGICITKPP
FST	(<400>20)	MARSLCFMAFAILAMMLFVAYEV-----QA-RECKTESNTFPGICITKPP
TTP3	(<400>21)	MARSIFFMAFLVLAMMLFVTYEV-----EAQQICKAPSQTFPGLCFMDSS
NTS13	(<400>22)	MANSMRFFATVLLIALLVTATEMGPMTIAEA-RTCESQSHRFKGPCSRDSN
PPT	(<400>23)	MGRSIRLFATFFLIAMLFLSTEMGPMTSAEA-RTCESQSHRFHGTCVRESN
ATPIIIa	(<400>24)	MKLSMRLISAVLIMFMIFVATGMGPVT-VEA-RTCESQSHRFKGTCVSASN

NaPdf1	CRKACISEKFTDGHCSKILRRCLCTKPCVFDEKMTKTGAELAEEAKTLAAALLEEEIMDN
FST	CRKACISEKFTDGHCSKLLRRCLCTKPCVFDEKMIKTGAETLVEEAKTLAAALLEEEIMDN
TTP3	CRKYCIKEKFTGGHCSKLQRKCLCTKPCVFDFKISSEVKA-TLGEEAKTLSEVVLEEEEIMME
NTS13	CATVCLTEGFSGGRCPWIPPRCFCTS PC-----
PPT	CASVCQTEGFIGGNCRAFRRRCFCTRNC-----
ATPIIIa	CANVCHNEGFVGGNCRGFRRRCFCTRHC-----

Figure 9

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<i>Nicotiana alata</i>	NaPdf1	-REC-KTESNTP-GICITKPPCRKACIS-EKFTDGH-CSK--ILRRCLCTKPC-	(<4 00>8)
<i>Nicotiana tabacum</i>	FST	-REC-KTESNTP-GICITKPPCRKACIS-EKFTDGH-CSK--ILRRCLCTKPC-	(<4 00>25)
<i>Lycopersicon esculentum</i>	TPP3	-QIC-KAPSQTFF-GLCFMDSSCRKYCIK-EKFTGHH-CSK--LQRKCLCTKPC-	(<4 00>26)
<i>Solanum tuberosum</i>	P322	-RHC-ESLSHRFK-GPCTRDNSNCASVCET-ERFSGGN-CHG-F-RRRFCFTKPC-	(<4 00>27)
<i>Petunia inflata</i>	PPT	-RTC-ESQSHRFH-GTCVRESNCASVCQT-EGFIIGGN-CRA-F-RRRFCFTRNC-	(<4 00>28)
<i>Glycine max</i>	SE60	-RVC-ESQSHGFH-GLCNRDHNCALVCRNE-G-FSGGRCKKG-F-RRRFCFTRIC-	(<4 00>29)
<i>Hordeum vulgare</i>	Y1-H	-RIC-RRSAGFK-GPCVSNKNCAQVMQE-G-WGGGNCDG--PLRRCKCMRRC-	(<4 00>30)
<i>Sinapis alba</i>	M2A	pQKLC-QRPSGTWS-GVCGNNNACRNQCINLEKARHGS-CNYVFPAAHKCICYFPC-	(<4 00>31)
<i>Solanum tuberosum</i>	PTH-St1	-RNC-ESLSHRFK-GPCTRDNSNC-----	(<4 00>32)
<i>Raphanus sativus</i>	Rs-AFP1	pQKLC-ERPSGTWS-GVCGNNNACKNQCINLEKARHGS-CNYVFPAAHKCICYFPC-	(<4 00>33)
<i>Raphanus sativus</i>	Rs-AFP2	pQKLC-QRPSGTWS-GVCGNNNACKNQCIRLEKARHGS-CNYVFPAAHKCICYFPC-	(<4 00>34)
<i>Sinapis alba</i>	M1	pQKLC-ERPSGTWS-GVCGNNNACKNQCINLEKARHGS-CNYVFPAAHKCICYFPC-	(<4 00>35)
<i>Sinapis alba</i>	M2B	pQKLC-ARPSGTWSSGGNCRNNNACRNFCIKILEKSRHGS-CNLPPPSNPKCICYFPC-	(<4 00>36)
<i>Triticum turgidum</i>	Y1-P	-KIC-RRSAGFK-GPCMMSNKNCAQVCQQE-G-WGGGNCDG--PFRRCKCIRQC-	(<4 00>37)
<i>Triticum turgidum</i>	Y2-P	-KVC-RQRSAGFK-GPCVSDKNCAQVCLOE-G-WGGGNCDG--PFRRCKCIRQC-	(<4 00>38)
<i>Vigna unguiculata</i>	10kDa	-KTC-ENLVDTYR-GPCFTTGSCDDHCKNKEHLLSGR-CR----DDVRCWCTRNC-	(<4 00>39)
<i>Sorghum bicolor</i>	Sra2	-RVC-MGKSAFK-GLCMRDQNCAQVCLOE-G-WGGGNCDG--VMROCKCIRQCW	(<4 00>40)
<i>Sorghum bicolor</i>	Sra3	-RVC-RRSAGFK-GLCMSDHNCAQVCLOE-G-WGGGNCDG--VIROCKCIRQCW	(<4 00>41)
<i>Dalia merckii</i>	Dm-AMP2	-EVC-EKASKTWS-GNCGNTGHC--	(<4 00>42)
<i>Sorghum bicolor</i>	Sra1	-RVC-MKGSOHHS-FPCJSDRLCSNECVKEEGGWTAGYCH----LRYCRCQKAC-	(<4 00>43)
<i>Pisum sativum</i>	F1230	-NTC-ENLAGSYK-GVCF--GGCDRHCRTOEGAISGR-CR---DDFRCWCTKNC-	(<4 00>44)
<i>Aesculus hippocastanum</i>	Ah-AMP1	-LCNERPSQTWS-GNCGNTAHCDKQCDWEKAASHGA-CHKRENHWKFCYFNC-	(<4 00>45)
<i>Heuchera sanguinea</i>	Hs-AFP1	-KLC-DVPSGTWS-GHCGSSSKCSQQCKDREHFAYGGACHYQFPSVKCFCKRQC-	(<4 00>46)
<i>Dalia merckii</i>	Dm-AMP1	-ELC-EKASKTWS-GNCGNTHGCDNQCKSWEAAHGA-CHVRNGKHMFCYFNC-	(<4 00>47)
<i>Pisum sativum</i>	P139	-NTC-EHLADTYR-GVCHTNASCDDHCKNKAHLISGT-CH----DWKCFCTQNC-	(<4 00>48)
<i>Citória ternatae</i>	Ct-AMP1	-NLC-ERASLTWT-GNCGNTGHCDTQCRNWESAHKGA-CHKRGN-WKCFCYFNC-	(<4 00>49)

Figure 10

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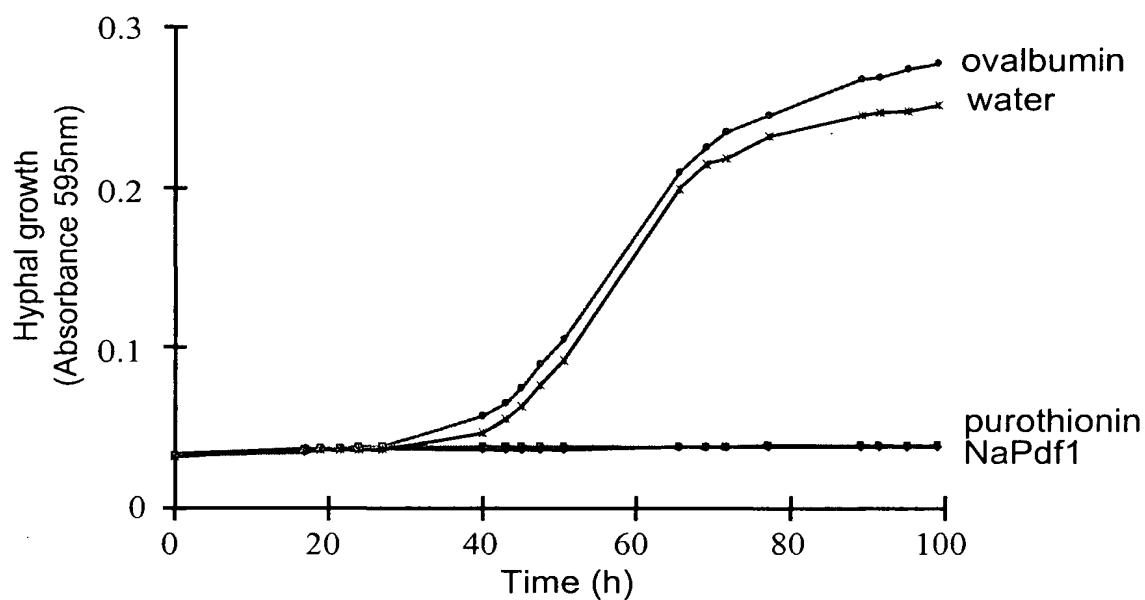


Figure 11

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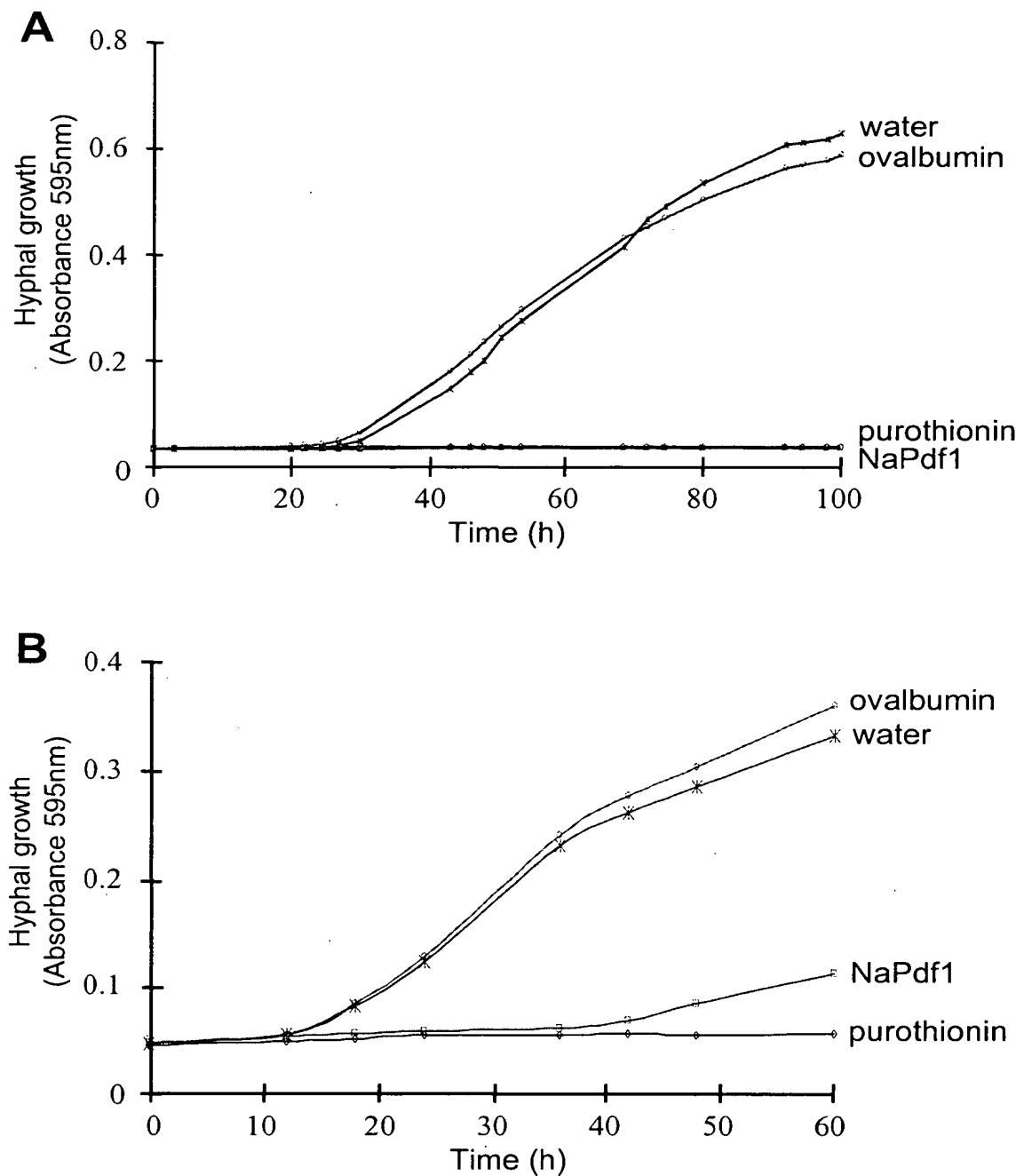


Figure 12

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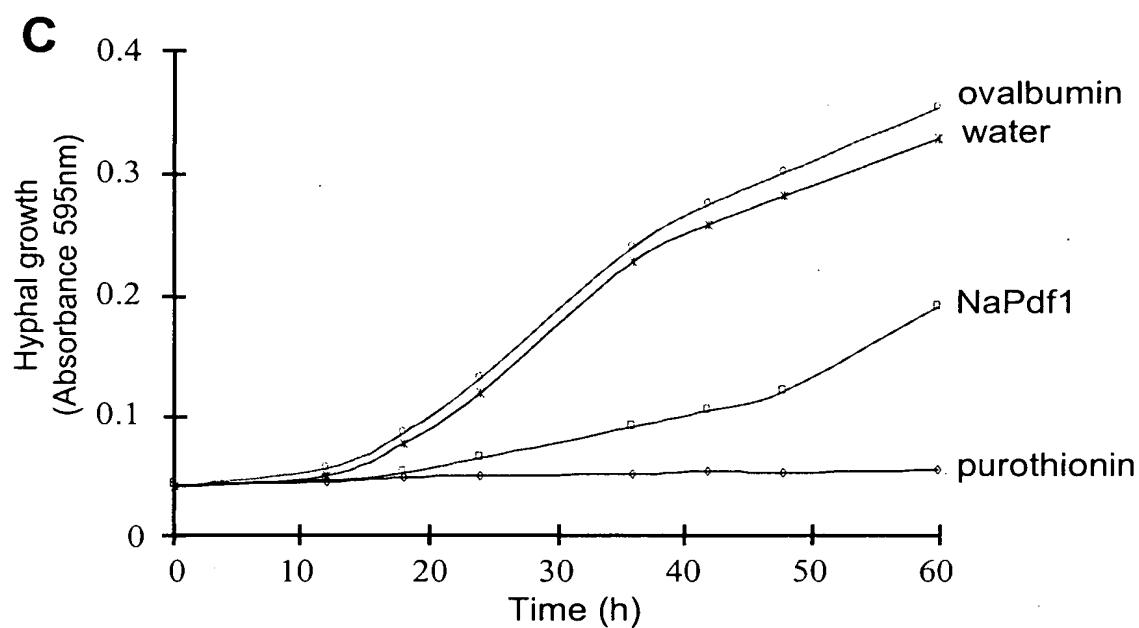


Figure 12 continued

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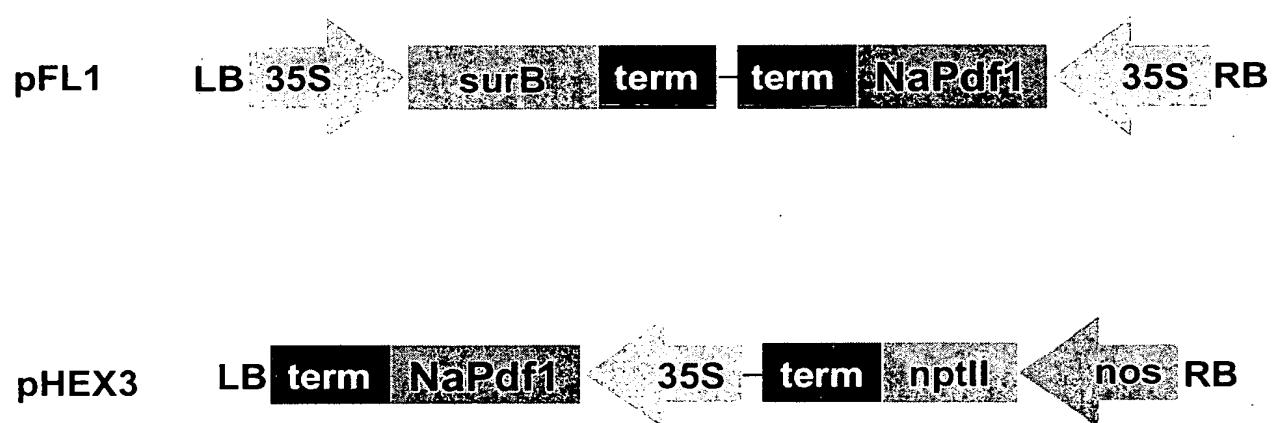


Figure 13

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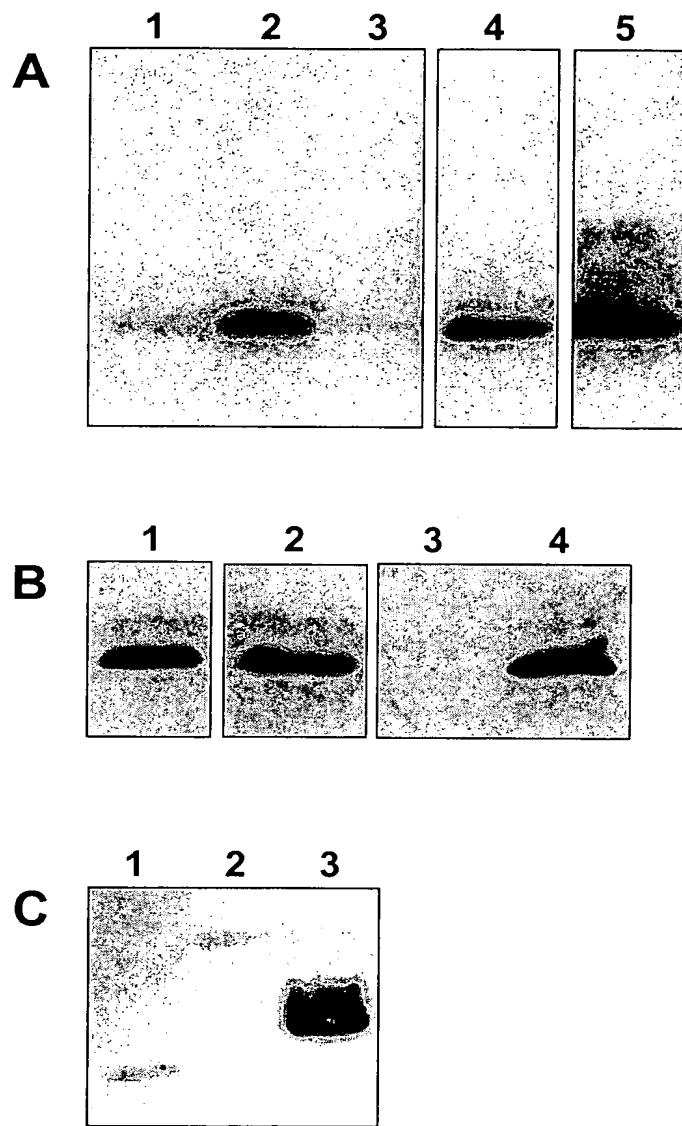


Figure 14

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H. punctigera bioassay with transgenic tobacco

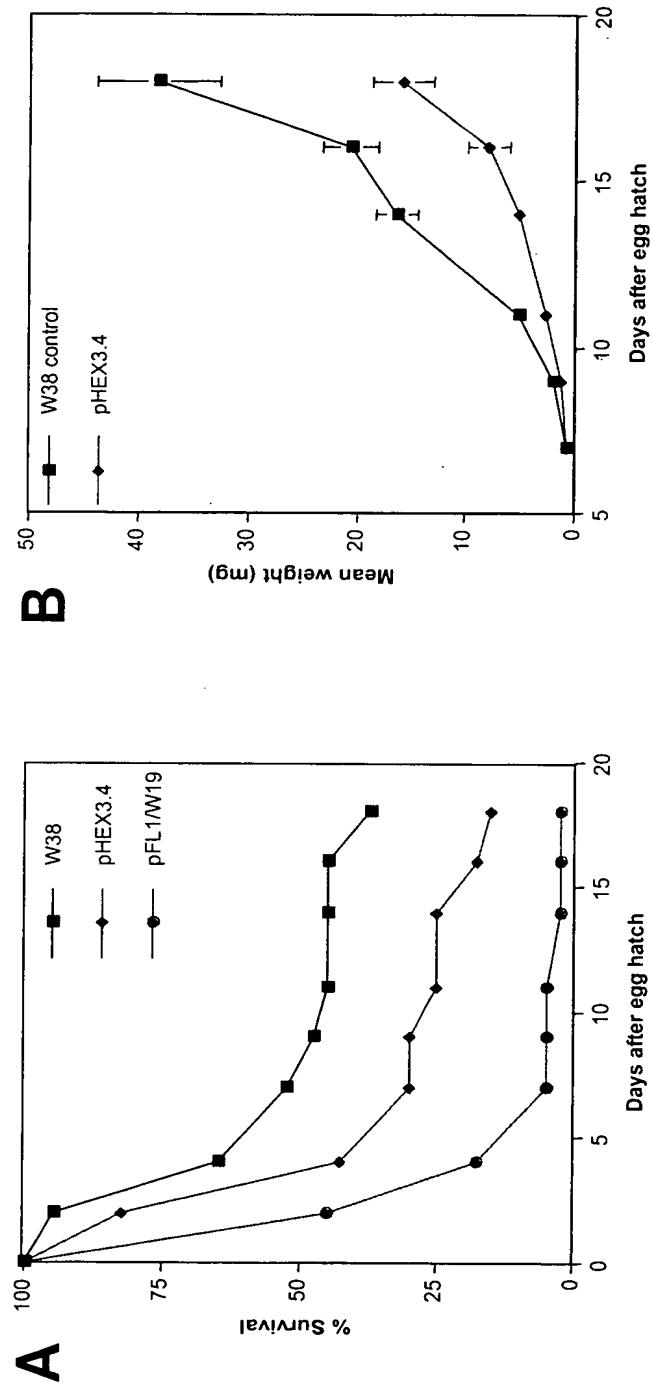


Figure 15

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H. armigera bioassay with transgenic tobacco

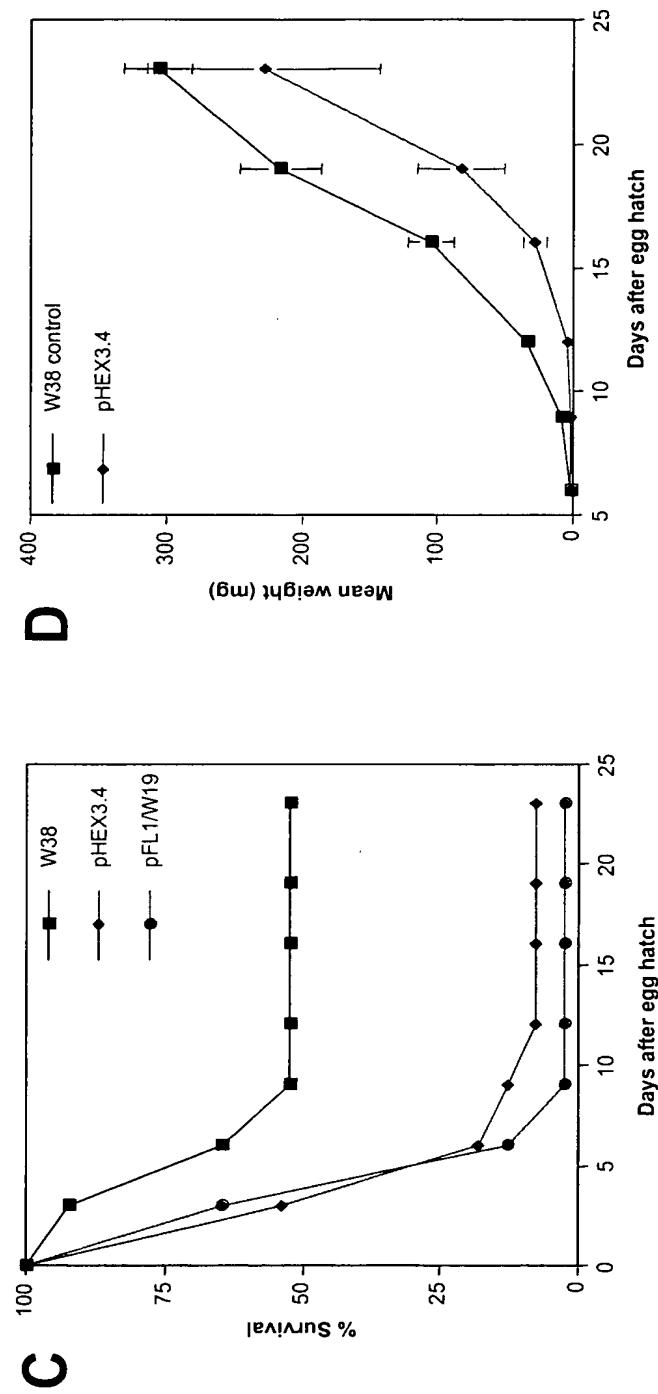


Figure 15 continued

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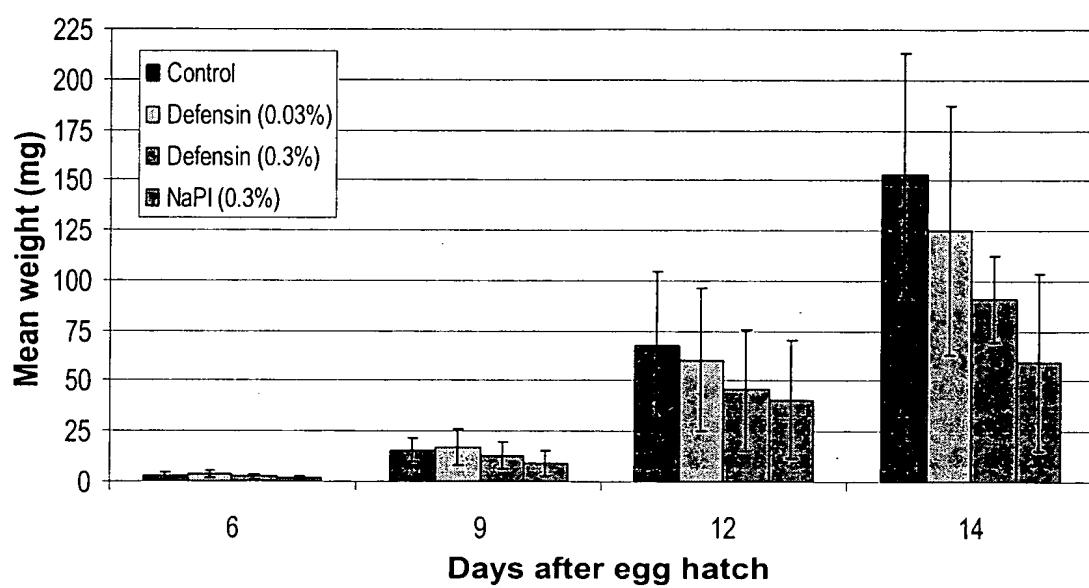


Figure 16

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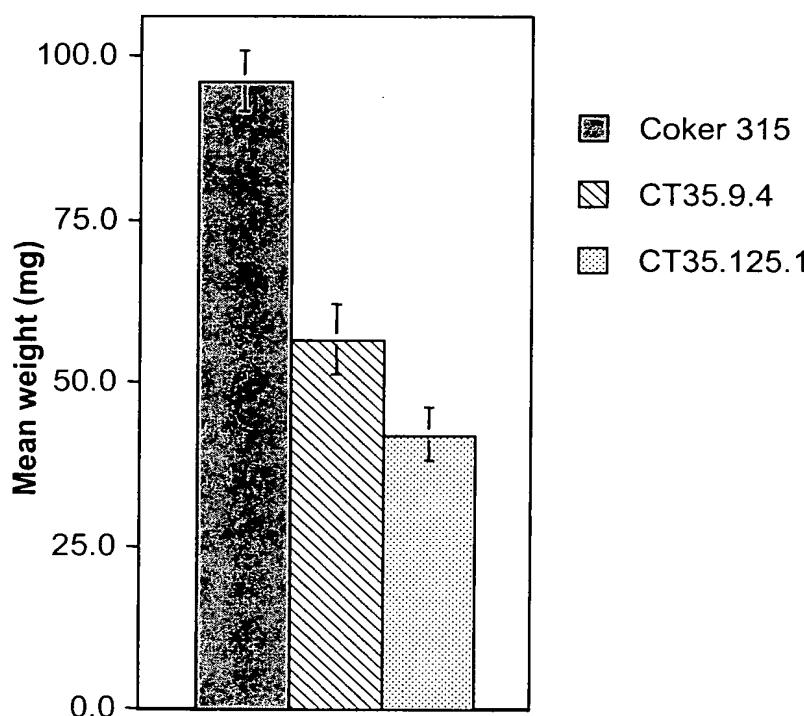


Figure 17